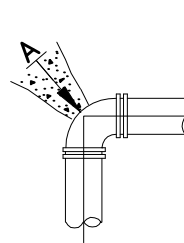
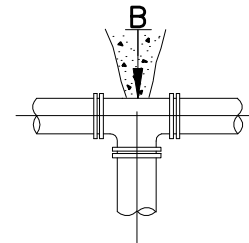


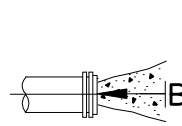
| THRUST BLOCK – TABLE | | | | | | | |
|----------------------|--------------|---|--------------------|--------------------|----------------|----------------------|-------------|
| PIPE SIZE | PRESSURE PSI | MINIMUM BEARING AREA AGAINST UNDISTURBED SOIL SQUARE FEET | | | | | |
| | | A | B | C | D | E | X (100 PSI) |
| 4" | 200 300 | 2/(1) 3/(2) | 1/(NONE) 2/(2) | 1/(NONE) 2/(1) | NONE 1/(1) | NONE NONE | NONE |
| 6" | 200 300 | 4/(3) 6/(4) | 3/(2) 4/(3) | 3/(1) 3/(2) | 1/(1) 2/(1) | 1/(NONE) 1/(NONE) | NONE |
| 8" | 200 300 | 7/(5) 11/(8) | 5/(3) 8/(5) | 4/(3) 6/(4) | 2/(2) 3/(2) | 1/(1) 2/(1) | 3/(2) |
| 10" | 200 275 | 11/(8) 16/(11) | 8/(6) 11/(7) | 6/(4) 9/(6) | 3/(2) 5/(3) | 2/(1) 3/(2) | 4/(3) |
| 12" | 200 250 | 16/(11) 24/(16) | 11/(8) 17/(11) | 9/(6) 13/(9) | 5/(3) 7/(5) | 3/(2) 4/(3) | 5/(4) |
| 14" | 200 250 | 22/(13) 33/(22) | 16/(11) 23/(16) | 12/(8) 18/(12) | 6/(4) 9/(6) | 3/(2) 5/(3) | 7/(6) |
| 16" | 200 225 | 29/(19) 32/(21) | 21/(14) 23/(16) | 16/(11) 17/(12) | 8/(6) 9/(6) | 5/(3) 5/(3) | 10/(7) |
| 18" | 200 | 36/(24) | 26/(17) | 20/(13) | 10/(7) | 5/(4) | 13/(9) |
| 20" | 200 | 45/(29) | 32/(21) | 24/(16) | 13/(8) | 7/(4) | 16/(11) |
| 24" | 200 | 64/(43) | 46/(30) | 35/(23) | 18/(12) | 9/(6) | 23/(16) |



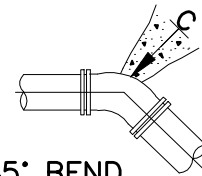
90° BEND



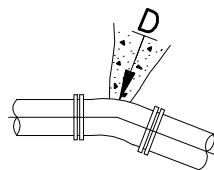
TEE



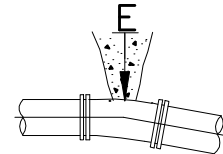
CAP



45° BEND



22 1/2° BEND



11 1/4° BEND

SAFE BEARING LOADS IN LB./SQ. FT.
THE SAFE BEARING LOADS GIVEN IN THE FOLLOWING TABLE ARE FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET.

| SOIL | SAFE BEARING LOAD LB. PER SQ. FT. |
|-------------------------------------|--------------------------------------|
| * MUCK, PEAT, ETC. | 0 |
| SOFT CLAY | 1,000 |
| SAND | 2,000 |
| SAND & GRAVEL | 3,000 |
| SAND & GRAVEL CEMENTED WITH CLAY | 4,000 |
| HARD SHALE | 10,000 |

* IN MUCK OR PEAT, ALL THRUSTS SHALL BE RESTRAINED BY PILES OR TIE RODS TO SOLID FOUNDATIONS OR BY REMOVAL OF MUCK OR PEAT AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THRUST.

NOTES:

1. SQUARE FEET OF CONCRETE THRUSTS – BLOCK AREA BASED ON SAFE BEARING LOAD OF 2000/(3000) POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER SIZE PIPE, PRESSURES & SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE & HAVE MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY & SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT.
5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.



City of
Bellevue

WATER UTILITY

TITLE

CONCRETE BLOCKING

JANUARY 2011

NO SCALE

NO. W-1